

CLAIMS

What is claimed is:

1. A key assembly comprising:

a key shank having a blade portion and a handle portion, said handle portion having a thickness;

a transponder for receiving a wireless interrogation signal and transmitting a wireless response signal in response to the interrogation signal;

a shuttle including:

a first surface having a substantially planar portion;

a second surface having a substantially planar portion parallel to the substantially planar portion of the first surface and separated therefrom by a substantially uniform distance greater than the thickness of the key shank handle portion;

a shank recess having a receiving end for receiving the handle portion of the key shank and a terminal end having an obstruction for limiting the depth that the handle portion is received in the shank recess; and

a transponder recess having a receiving end for receiving the transponder and a terminal end having an obstruction for limiting the depth that the transponder is received in the transponder recess; and

a key head integrally formed about said shuttle, transponder, and handle portion of the key shank.

2. The key assembly of claim 1 wherein said transponder is substantially cylindrical.

3. The key assembly of claim 1 wherein said transponder is substantially rectangular.

4. The key assembly of claim 1 wherein the terminal end of said shank recess is closed.

5. The key assembly of claim 1 wherein the terminal end of said transponder recess is closed.

6. The key assembly of claim 1 wherein the handle portion of said key shank is substantially rectangular.

7. The key assembly of claim 6 wherein the handle portion of the key shank is offset from the blade portion of the key shank, forming a shoulder adjacent the handle portion, said shank recess including a ledge for receiving the shoulder.

8. The key assembly of claim 1 wherein the handle portion includes two spaced apart legs, said shuttle including a single shank recess for receiving both legs.

9. The key assembly of claim 1 wherein said transponder recess is keyed to prevent improper orientation of the transponder in the transponder recess.

10. The key assembly of claim 1 wherein said first and second surfaces of the shuttle are corrugated.

11. A key assembly comprising:

a key shank having a blade portion and a handle portion, said handle portion having a thickness;

a transponder for receiving a wireless interrogation signal and transmitting a

5 wireless response signal in response to the interrogation signal;

a shuttle including:

a first surface having a substantially planar portion;

a second surface having a substantially planar portion parallel to the substantially planar portion of the first surface and separated therefrom by a substantially

10 uniform distance greater than the thickness of the key shank handle portion;

a shank recess having an open receiving end for receiving the handle portion

of the key shank and a closed terminal end for limiting the depth that the handle portion is received in the shank recess; and

- 15 a transponder recess having an open receiving end for receiving the transponder and a closed terminal end for limiting the depth that the transponder is received in the transponder recess; and

a key head integrally formed about said shuttle, transponder, and handle portion of the key shank.

12. The key assembly of claim 11 wherein said transponder is substantially cylindrical.

13. The key assembly of claim 11 wherein said transponder is substantially rectangular.

14. The key assembly of claim 11 wherein the handle portion of the key shank is offset from the blade portion of the key shank, forming a shoulder adjacent the handle portion, said shank recess including a ledge for receiving the shoulder.

15. The key assembly of claim 11 wherein the handle portion includes two spaced apart legs, said shuttle including a single shank recess for receiving both legs.

16. The key assembly of claim 11 wherein said transponder recess is keyed to prevent improper orientation of the transponder in the transponder recess.

17. The key assembly of claim 11 wherein said first and second surfaces of the shuttle are corrugated.

18. A key assembly comprising:
a key shank having a blade portion and a handle portion offset from the blade portion to form a shoulder adjacent the handle portion, said handle portion having a

thickness;

- 5 a transponder for receiving a wireless interrogation signal and transmitting a wireless response signal in response to the interrogation signal;

 a shuttle including:

 a first substantially planar surface;

- 10 a second substantially planar surface parallel to the first substantially planar surface and separated therefrom by a substantially uniform distance greater than the thickness of the key shank handle portion;

 a shank recess having:

 an open receiving end for receiving the handle portion of the key shank;

15 a terminal end in opposed relation to the open receiving end; and

 a ledge for receiving the shoulder of the key shank handle portion for limiting the depth that the handle portion is received in the shank recess;

 a transponder recess having an open receiving end for receiving the transponder and a terminal end; and

20 a key head integrally formed about said shuttle, transponder, and handle portion of the key shank.